



TITLE:

<Essay> Lack of "Group Play" in Wild Chimpanzees

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<ESSAY>**Lack of "Group Play" in Wild Chimpanzees**

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For the function of animal play, I adopt the hypothesis that play is practice for serious behavior that will be useful in the future, as was proposed by Groos (1). Animal play behavior is usually classified into "locomotor play," "object play," and "social play" (2). The M group chimpanzees of Mahale engage in play that is not so simple. I would add three more categories, namely, social locomotor play, social object play, and social locomotor object play.

Social locomotor play includes a youngster climbing a tree followed by one or more youngsters, hanging and/or brachiating, and falling or leaping down to the ground. They may also "hang-wrestle" (hanging from a branch with one hand and grappling with the rival with the other hand) before climbing down to the ground. They repeat the entire sequence again and again. As social locomotor play, the youngsters of Mahale often engage in "circling." Two chimpanzees chase each other, moving around in a circle again and again. They sometimes change direction, and one or both of the participants often somersault in a particular spot in every round of circling. They may mix circling with wrestling or play-fighting.

Chimpanzee youngsters occasionally incorporate stones, twigs, and human artifacts such as broken clay pots as toys in social play. Not only do they use them as tools for the solicitation of play ("play start"), but they also mock-compete for the possession of the item. This may be called social object play. Furthermore, when youngsters bring rocks to a tree and hang-wrestle with each other, while competing for the rock, this may be called social locomotor object play. As such, the play patterns of chimpanzees are multifold and complex, but one key factor found among human beings is completely lacking: "group play." I mean by group play two groups of people competing or mock-fighting for victory. Chimpanzees do engage in play-fight, and sometimes three or more youngsters may grapple with one another. However, I have never seen a team of two or more



Figure 1. Two chimpanzee youngsters of Mahale chase each other and "hang-circle" around a tree.

chimpanzees play-fight against another team of a similar number of chimpanzees.

I have searched for records of group play in animals. I have never found any account of social animals splitting into two groups and competing or play-fighting against each other. "Animal Play Behavior," (3) the most conclusive review of animal play published so far, did not contain any examples of group play among animals.

By contrast, human beings greatly enjoy group play. People are excited to engage in baseball, soccer, rugby, basketball, volleyball, tug-of-war, boat races, etc. Even in card games, there is "Napoleon," in which two coalitions fight against each other. If local games are included, we can find many more examples. For example, in Japan, three schoolboys make a "warfare cart" and another boy rides on them. The boys above

the cart fight each other with extended arms, and the winner is the one who removes the cap of the rival. Such group play may be one of the human universals, although the most thorough review of human universals (4) does not include it as such. If the hypothesis that play's function is the practice of behavior useful in future adult life is correct, what is the function of group play in human beings? I would suggest that the function of group play is the practice of war, or an organized battle between two groups.

In the animal kingdom, coalitions are mostly formed against individuals. In within-group contests among chimpanzees, a contestant assisted by a third party fights against his rival (5, 6). Gang attack has always been directed to only one or at most two individuals. An exile, or ostracized ex-alpha male, was chased fiercely (7) or severely attacked (8) by a group of chimpanzees. A young adult male who had not greeted his superiors was severely attacked by an alpha male and his seven coalition partners (9). In a possible example of sexual competition, a young low-ranking adult male was killed by many adult males (10). Even in unit group antagonisms among chimpanzees, only one party is an "organized" multi-male party, and the counterpart is usually a lone individual who is victimized (11, 12, 13).

Therefore, Boehm's (14) "macro-coalition," the terminology coined for between-group conflicts, might be a misnomer. An exception is male dolphins. Two or three male dolphins unite forces against another such coalition in competition for fertile females (15). If my theory is correct, dolphins may be the sole animal other than human beings in which group play can be observed. Perhaps Lorenz (16) was close to my theory when he suggested that sports are a good outlet for human aggressive impulses toward war. However, he did not remark that there were no animals engaged in group play, since at that time there was scarcely any detailed study of big-brained animals such as chimpanzees and dolphins. Nor did I suggest that sports provide an outlet for the compulsion to war, although I do assert that sports serve as practice for war.

If my theory is correct, bellicose tribes or nations may encourage group play among youngsters of their kind. This may be corroborated or refuted by the comparison of

ethnographic data of tribal wars that Prof. Takeo Funabiki and myself are now pursuing.

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